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Scott William McIntosh

- EDUCATION** University of Glasgow, Glasgow, Scotland Oct. 1995 – Aug. 1998
Department of Physics and Astronomy
Ph. D. Astrophysics
Thesis Title: “Optimal Diagnosis of Hot Solar Plasmas”
- University of Glasgow, Glasgow, Scotland Oct. 1991 – Jun. 1995
Department of Physics and Astronomy
B. Sc. (Hons. First Class) Mathematics and Physics
- EXPERIENCE** NASA Goddard Space Flight Center, Greenbelt MD. Feb. 2001 - Present
European Space Agency, External Fellow
- Analysis of SOHO and TRACE UV/EUV data.
- Development of Radiation MHD code.
- Development of Wavelet analysis techniques for solar data.
- Studying the Self-Organized Criticality.
- NCAR High Altitude Observatory, Boulder, CO Jan. 1999 – Jan. 2001
Advanced Study Program, Post-Doctoral Fellow
- Analysis of SOHO and TRACE UV/EUV data.
- Solar UV/EUV remote sensing problems
- Studying MHD wave propagation in the solar atmosphere
- University of Glasgow, Glasgow, Scotland Sep. 1998 – Dec. 1999
UK PPARC/RAL Starlink System Manager
- General system administration duties
- Departmental webmaster
- SKILLS** Expertise in the use of the Interactive Data Language (IDL) for data analysis
Languages : French (Int.), German (Int.), Italian (Beg.), Norwegian (Beg.)
Computing (Platforms) : UNIX (several flavors), Linux, Windows (95,98,2000, NT)
Computing (Languages) : F77, F90, C, C++, Java, Pascal, HTML, Flash
- ACTIVITIES** Member of American Astronomical Society and American Geophysical Union.
Peer reviewer/referee for Astronomy & Astrophysics, Solar Physics and Experimental
Astronomy Journals
- HONORS** M. K. Hunter Memorial Award for Research in Physics (1996).
Physics class prize (1992,1994).
Mathematics class prize (1991).
(All University of Glasgow, Glasgow, Scotland)
- INTERESTS** Reading, Writing (articles and correspondence), Travel,
Golf (single-figure handicap), Soccer, Running, Squash, Badminton,
Hill-walking, Camping, Climbing

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PUBLICATIONS

- 2002** McIntosh, S. W., Charbonneau, P., Liu, H. and Bogdan, T. J., “*Geometrical Properties of Avalanches in Self-Organized Critical Models of Solar Flares*”. Submitted, Physical Review (E) (October, 2001).
McIntosh, S. W., Charbonneau, P., “*Geometrical Effects in Avalanche Models for Solar Flares: Implications for Coronal Heating*”. Submitted, Astrophysics Journal Letters (October, 2001).
- 2001** Rosenthal, C., Bogdan, T. J., Carlsson, M., Dorch, S. B. F., Hansteen, V., McIntosh, S. W., McMurry, A., Nordlund, A. and Stein, R. F., “*Waves in the Magnetized Solar Atmosphere I: Basic Processes and Internetwork Oscillations*”. Accepted, Astrophysical Journal (September 2001).
Charbonneau, P., McIntosh, S. W., Liu, H. and Bogdan, T. J., “*Avalanche models for Solar Flares*” (Invited Review). To Appear, Solar Physics (December, 2001).
McIntosh, S. W., Judge, P. G., Astrophysical Journal, **561**, 420. “*On the Nature of Magnetic Shadows in the Solar Chromosphere*”.
Norman, J. P., Charbonneau, P., McIntosh, S. W., Liu, H., Astrophysical Journal, **557**, 891. “*Waiting Time Distributions in Lattice Models of Solar Flares*”.
McIntosh, S. W., Bogdan, T. J., Gaily, P. S., Carlsson, M., Hansteen, V. H. Judge, P. G., Lites, B. W., Peter, H., Rosenthal, C. S. and Tarbell, T. D., Astrophysical Journal Letters, **548**, 237. “*An Observational Manifestation of Magneto-Atmospheric Waves In Inter-network Regions of the Chromosphere and Transition Region*”.
- 2000** McIntosh, S. W., Astrophysical Journal, **533**, 1043. “*On the Inference of Differential Emission Measures Using Diagnostic Line Ratios*”.
McIntosh, S. W., Charbonneau, P. and Brown, J. C., Astrophysical Journal, **529**, 1115. “*Preconditioning the DEM(Te) Inverse Problem*”.
- 1999** Piana, M., Barrett, R. K., Brown, J. C. and McIntosh, S. W., Inverse Problems, **15**, 1469. “*A Non-uniqueness Problem in Solar Hard X-Ray Spectroscopy*”.
Judge, P. G., McIntosh, S. W., Solar Physics, **190**, 331. “*Non-uniqueness in Atmospheric Modeling*”.
- 1998** McIntosh, S. W., **Ph. D. Thesis**, University of Glasgow. “*Optimal Spectral Diagnosis of Hot Solar Plasmas*”.
McIntosh, S. W., Brown, J. C. and Judge, P. G., Astronomy & Astrophysics, **333**, 333. “*The Relation Between Line Ratio and Emission Measure Analyses*”.
Brown, J. C., McArthur, G. A., Barrett R. K., McIntosh, S. W. and Emslie, A. G., Solar Physics, **179**, 379. “*Inversion of Thick Target Bremsstrahlung Spectra from Non-uniformly Ionized Plasma*”.
McIntosh, S. W., Diver, D. A., Judge, P. G., Charbonneau, P., Ireland, J. and Brown, J. C., Astronomy & Astrophysics Supp., **132**, 145. “*Spectral Decomposition by Genetic Forward Modeling*”.

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